



## PATENT ABSTRACTS OF JAPAN

(11) Publication number: **05112810 A**(43) Date of publication of application: **07.05.93**

(51) Int. Cl.

**C21D 1/38****B21B 45/00****B23K 9/013**(21) Application number: **03272896**(71) Applicant: **NIPPON STEEL CORP**(22) Date of filing: **21.10.91**(72) Inventor: **HORIE MASANOBU****(54) METHOD FOR TREATING SURFACE BY VACUUM ARC ELECTRIC DISCHARGE**

electrode is fused, by which the flaws of the edges are made harmless.

## (57) Abstract:

COPYRIGHT: (C)1993,JPO&amp;Japio

**PURPOSE:** To reduce the amt. of trimming and to improve the yield by detecting the edges of the material to be treated which is continuously fed, regulating the electric discharge mode of a divided unit electrode into set value and subjecting it to electric discharge machining.

**CONSTITUTION:** A vacuum treating chamber 30 held to a vacuum of 1 to  $10^{-3}$ Torr is opposite equipped with electrodes 9 and conductor rolls 6 one after the other with the pass line of the strip 20 interposed. As for the electrodes 9, largely divided electrodes are arranged in a row in the breadwise direction of the strip 20, and the unit electrode is each provided with an electric discharge mode selectively. While the strip 20 is passed through, the edges of the sheet are detected, e.g. by a photocell 32, and the electric discharge mode of the unit electrode directly above or directly below the edge parts of the sheet among the electrodes 9 is regulated to previously set value. Then, oxides encroached on the edges are evaporated away by an electric discharge arc, and after that, a crater part removed by the electric discharge mode of the other unit

